IN THE CLAIMS

1 – 52. (canceled)

53. (previously presented) A power converter system comprising:

a thermal support configured to receive and circulate a coolant stream for extraction of heat;

a first power converter circuit secured to and cooled by the support, the first power converter being configured to receive input power and to convert the input power to first output power having desired characteristics; and

a second power converter circuit secured to and cooled by the support, the second power converter being configured to receive input power and to convert the input power to second output power having desired characteristics different from those of the first output power.

54. (previously presented) The system of claim 53, wherein at least one of the first and second converter circuits is configured to perform AC-to-AC conversion.

55. (previously presented) The system of claim 53, wherein at least one of the first and second converter circuits is configured to generate three-phase output power.

56. (previously presented) The system of claim 53, wherein at least one of the first and second converter circuits is configured to receive DC input power.

57. (previously presented) The system of claim 53, wherein the support at least partially defining an electric reference plane for operation of the first and second converter circuits.

58. (previously presented) The system of claim 53, wherein the support includes a channel for receiving a cooling medium, and wherein each of the converter circuits includes a substrate having a passage in fluid communication with the channel of the support for cooling the converter circuits during operation.

59. (previously presented) The system of claim 58, comprising a flow control valve for regulation of fluid flow though the support.

60. (previously presented) The system of claim 59, comprising a thermal sensor coupled to the flow control valve to permit closed loop control of fluid flow though the support.

61. (previously presented) The system of claim 53, wherein the first and second converter circuits are configured to operate independently of one another.

62. (previously presented) A power converter system comprising:

a backplane for routing electrical power and thermal energy;

a first power converter secured to the backplane, the first power converter including power electronics circuit configured to produce first output power having desired characteristics; and

a second power converter secured to the backplane, the second power converter including power electronics circuitry configured to produce second output power independently of the first power converter.

63. (previously presented) The system of claim 62, wherein the first output power has electrical characteristics different from those of the second output power.

64. (previously presented) The system of claim 63, wherein the first output power is three-phase power and the second output power is single-phase power.

65. (previously presented) The system of claim 62, wherein the backplane includes a channel for circulation of a cooling medium.

66. (previously presented) The system of claim 65, wherein at least one of the first and second converters includes a passage in fluid communication with the channel for receiving the cooling medium.

67. (previously presented) The system of claim 62, wherein the backplane routes electrical power to and from the converters.

68. (previously presented) The system of claim 62, wherein at least one of the first and second converters is configured to perform AC-to-AC power conversion.

69. (previously presented) The system of claim 62, wherein at least one of the first and second converters is configured to generate three-phase output power.

70. (previously presented) The system of claim 62, wherein at least one of the first and second converters is configured to receive DC input power.

71. (previously presented) A power converter system comprising:

a backplane for routing electrical power and thermal energy, the backplane includes a channel for circulation of a cooling medium;

a first power converter secured to the backplane, the first power converter including power electronics circuit configured to produce first output power having desired characteristics; and

a second power converter secured to the backplane, the second power converter including power electronics circuitry configured to produce second output power independently of the first power converter;

wherein at least one of the first and second converters includes a passage in fluid communication with the channel for receiving the cooling medium.

72. (previously presented) The system of claim 71, wherein the backplane routes electrical power to and from the converters.

73. (previously presented) The system of claim 71, wherein at least one of the first and second converters is configured to perform AC-to-AC power conversion.

74. (previously presented) The system of claim 71, wherein at least one of the first and second converters is configured to generate three-phase output power.

75. (previously presented) The system of claim 71, wherein at least one of the first and second converters is configured to receive DC input power.

76. (previously presented) A method for converting electrical power, the method comprising:

converting input power to first output power having first desired characteristics;

converting input power to second output power having second desired characteristics;

routing the input power and output power to external circuitry via a shared support.

77. (previously presented) The method of claim 76, wherein the first and second output power have different desired characteristics.

78. (previously presented) The method of claim 76, wherein at least one of the first and second output power is three-phase power.

79. (previously presented) The method of claim 76, wherein the first and second output power are generated independently on one another.

80. (previously presented) The method of claim 76, further comprising circulating a cooling medium through the shared support and converters generating the first and second output power.

81. (previously presented) A method for converting electrical power, the method comprising:

converting input power to first output power having first desired characteristics;

converting input power to second output power having second desired characteristics; and

routing the input power and output power to external circuitry via a shared support; and

circulating a cooling medium through the shared support and converters generating the first and second power to remove heat generated during operation.

82. (previously presented) A system for converting electrical power, the method comprising:

means for converting input power to first output power having first desired characteristics;

means for converting input power to second output power having second desired characteristics;

means for routing the input power and output power to external circuitry via a shared support.

83. (previously presented) A method for converting electrical power, the method comprising:

means for converting input power to first output power having first desired characteristics;

means for converting input power to second output power having second desired characteristics;

means for routing the input power and output power to external circuitry via a shared support; and

means for circulating a cooling medium through the shared support and means for converting to remove heat generated during operation.